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{ REPORT
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NUCLEAR WASTE POLICY AMENDMENTS ACT OF 1999

JUNE 24, 1999.—Ordered to be printed

Mr. MURKOWSKI, from the Committee on Energy and Natural
Resources, submitted the following

REPORT

together with

MINORITY VIEWS

[To accompany S. 1287]

The Committee on Energy and Natural Resources, having considered the same, reports favorably an original bill, to provide for the storage of spent nuclear fuel pending completion of the nuclear waste repository, and for other purposes, and recommends that the bill do pass.

The text of the bill follows:

SECTION 1. SHORT TITLE.

This Act may be cited as the “Nuclear Waste Policy Amendments Act of 1999”.

SEC. 2. DEFINITIONS.

For purposes of this Act—

(1) the term “contract holder” means a party to a contract with the Secretary of Energy for the disposal of spent nuclear fuel or high-level radioactive waste entered into pursuant to section 302(a) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 1022(a)); and

(2) the terms “Administrator”, “civilian nuclear power reactor”, “Commission”, “Department”, “disposal”, “high-level radioactive waste”, “Indian tribe”, “repository”, “reservation”, “Secretary”, “spent nuclear fuel”, “State”, “storage”, “Waste Fund”, and “Yucca Mountain site” shall have the meanings given such terms in section 2 of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10101).

TITLE I—STORAGE AND DISPOSAL

SEC. 101. PROGRAM SCHEDULE.

(a) IN GENERAL.—The President, the Secretary, and the Nuclear Regulatory Commission shall carry out their duties under this Act and the Nuclear Waste Policy

Act of 1982 by the earliest practicable date consistent with the public interest and applicable provisions of law.

(b) MILESTONES.—

(1) The Secretary shall make a final decision whether to recommend the Yucca Mountain site for development of the repository to the President by December 31, 2001;

(2) The President shall make a final decision whether to recommend the Yucca Mountain site for development of the repository to the Congress by March 31, 2002;

(3) The Nuclear Regulatory Commission shall make a final decision whether to authorize construction of the repository by December 31, 2006; and

(4) As provided in subsection (c), the Secretary shall begin receiving waste at the repository site at the earliest practicable date after receiving authorization from the Nuclear Regulatory Commission.

(c) RECEIPT FACILITIES.—

(1) Concurrent with the submission of an application for a construction authorization pursuant to section 114(b) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10134(b)), the Secretary shall apply to the Commission for a license to receive and possess spent nuclear fuel and high-level radioactive waste at surface facilities within the geologic repository operations area for the receipt, handling, packaging, and storage prior to emplacement.

(2) Concurrent with the issuance of the construction authorization under section 114(b) of the Nuclear Waste Policy Act of 1982, the Commission shall issue a license authorizing receipt and possession of spent nuclear fuel and high-level radioactive waste at surface facilities within the geologic repository operations area for the purposes in subsection (c)(1). The Commission shall issue this license in accordance with such standards as the Commission finds are necessary to protect the public health and safety.

(d) NOTICE OF NONCOMPLIANCE.—If, at any time, the Secretary, the President, or the Nuclear Regulatory Commission determines that the Secretary, President, or Commission, as appropriate, cannot meet a milestone under subsection (b), the Secretary, President, or Commission, as appropriate, shall immediately notify Congress—

- (1) that the deadline will not be met and the reason it will not be met; and
- (2) the date on which the milestone will be met.

SEC. 102. BACKUP STORAGE CAPACITY.

(a) AUTHORIZATION.—Subject to section 105(d), the Secretary shall enter into a contract under this subsection with any person generating or owning spent nuclear fuel that meets the requirements of section 135(b)(1)(A) and (B) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10155(b)(1)(A) and (B)) to—

(1) take title at the civilian nuclear power reactor site to such amounts of spent nuclear fuel from the civilian nuclear power reactor as the Commission determines cannot be stored onsite; and

(2) transport such spent nuclear fuel to, and store such spent nuclear fuel at—

(A) The repository site after the Commission has authorized construction of the repository without regard to the Secretary's Acceptance Priority Ranking report or Annual Capacity Report; or

(B) a privately owned and operated independent spent fuel storage facility licensed by the Nuclear Regulatory Commission.

SEC. 103. REPOSITORY LICENSING.

(a) Section 801 of the Energy Policy Act of 1992 is repealed.

(b) Section 121 of the Nuclear Waste Policy Act of 1982 is amended to read as follows:

“SEC. 121. (a) REPOSITORY LICENSING STANDARDS.—The Commission shall establish standards for protection of the public and the environment from releases of radioactive materials or radioactivity from the repository, consistent with the following:

“(1) RISK STANDARD.—The standard for protection of the public and environment from releases of radioactive materials or radioactivity from the repository after permanent closure shall limit the lifetime risk to the average member of the critical group of premature death from cancer due to such releases to approximately, but not greater than, 1 in 1000.

“(2) ESTABLISHMENT OF OVERALL SYSTEM PERFORMANCE OBJECTIVE.—The Commission shall implement the standard in paragraph (1) by establishing, by rule, an overall system performance objective for expected annual dose to the average member of the critical group. The Commission shall not promulgate

performance objectives for the repository in the form of release limits or contaminant levels for individual radionuclides discharged from the repository.

“(3) ASSUMPTION AND FACTORS.—The Commission shall specify, by rule, values for all of the assumptions deemed necessary to apply the overall system performance objective in a licensing proceeding for the repository, including reference biosphere and size characteristics of the critical group. For purposes of establishing the overall system performance objective in paragraph (2) and making the findings in subsection (b), the Commission shall not—

“(A) consider climate regimes that are substantially different from those that have occurred during the previous 100,000 years at the Yucca Mountain site;

“(B) consider catastrophic events where the health consequences of individual events themselves to the critical group can be reasonably assumed to exceed the health consequences due to the impact of the events on repository performance; and

“(C) base the overall system performance objective in paragraph (2) or the finding in subsection (b) on scenarios involving human intrusion into the repository following repository closure, although the Commission may consider the consequences of an assumed human intrusion scenario to determine if repository performance would be substantially degraded by a single instance of human intrusion during the first 1,000 years after repository closure.

“(4) DEFINITIONS.—As used in this section, the term “critical group” means a small group of people that is—

“(A) representative of individuals expected to be at highest risk of premature death from cancer as a result of discharges of radionuclides from the repository;

“(B) relatively homogeneous with respect to expected radiation dose, which shall mean that there shall be no more than a factor of 10 in variation in individual doses among members of the group; and

“(C) selected using reasonable assumptions concerning lifestyle, occupation, diet and eating habits, technological sophistication, and other relevant social and behavioral factors that are based on reasonably available information on inhabitants and conditions in the area within a 50-mile radius surrounding Yucca Mountain when the group is defined.

“(b) APPLICATION OF OVERALL SYSTEM PERFORMANCE OBJECTIVE.—The Commission shall issue a construction authorization, license to dispose of spent nuclear fuel and high-level radioactive waste in the repository, and license amendment to permit permanent closure of the repository, upon a finding of reasonable assurance, making allowance for the time period, hazards, and uncertainties involved, that for the first 10,000 years following closure of the repository, the overall system performance established pursuant to subsection (a) will be met. The finding of reasonable assurance shall be based on regulatory insight gained by the Commission through use of predictive models, supported, to the extent deemed practicable by the Commission, by data from field and laboratory tests, site-specific monitoring, and natural analog studies and supplemented, as necessary, by expert judgment.

“(c) ENVIRONMENTAL IMPACT STATEMENT.—The promulgation of standards or criteria in accordance with the provisions of this section shall not require the preparation of an environmental impact statement under section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C)) or any environmental review under subparagraph (E) or (F) of section 102(2) of such Act.”

(c) GUIDELINES.—Section 112(a) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10132(a)) is amended by adding, at the end of the section, the following: “The Secretary’s guidelines shall not be inconsistent with any standards promulgated under section 121, and to the extent practicable, any conclusions of the Secretary regarding site suitability shall be based on an assessment of total system performance of the repository.”

(d) CAPACITY.—Section 114 of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10134) is amended—

(1) in subsection (b) by inserting at the end: “In developing an application for authorization to construct the repository, the Secretary shall seek to maximize the capacity of the repository.”; and

(2) in subsection (d) by striking “The Commission decision approving the first such application * * *” through the period at the end of the sentence.

SEC. 104. NUCLEAR WASTE FEE.

The last sentence of section 302(a)(4) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10222(a)(4)) is amended to read as follows: “The adjusted fee proposed by the

Secretary shall be effective upon enactment of a joint resolution or other provision of law specifically approving the adjusted fee.”

SEC. 105. SETTLEMENT AGREEMENTS.

(a) IN GENERAL.—The Secretary may, upon the request of any person with whom he has entered into a contract under section 302(a) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10222(a), enter into a settlement agreement with the contract holder to—

- (1) relieve any harm caused by the Secretary’s failure to meet the Department’s commitment, or
- (2) settle any legal claims against the United States arising out of such failure.

(b) TYPES OF RELIEF.—Pursuant to a settlement agreement entered into under this section, the Secretary may—

- (1) take title to the contract holder’s spent nuclear fuel, notwithstanding section 302(a)(5) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10222(a)(5));
- (2) provide spent nuclear fuel storage casks to the contract holder;
- (3) take title to and operate an existing dry cask storage facility at the contract holder’s site;
- (4) compensate the contract holder for the cost of providing spent nuclear fuel storage at the contract holders’ storage facility; or
- (5) provide any combination of the foregoing.

(c) SCOPE OF RELIEF.—The Secretary’s obligation to take title to a contract holder’s spent nuclear fuel, provide storage casks, or compensate a contract holder for the cost of providing nuclear fuel storage under a settlement agreement under this section shall not exceed the Secretary’s obligation to accept delivery of such spent fuel under the terms of the Secretary’s contract with such contract holder under section 302(a) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10222(a)) and the delivery commitment schedule annexed thereto (including any otherwise permissible assignment of rights under such schedule).

(d) WAIVER OF CLAIMS.—(1) The Secretary may not enter into a settlement agreement under subsection (a) or a backup contract under section 102(a) with any contract holder unless the contract holder—

(A) makes an election within 180 days after the date of enactment of this Act to enter into a settlement agreement, and

(B) as part of such settlement agreement, waives any claim for damages against the United States arising out of the Secretary’s failure to begin disposing of such person’s high-level waste or spent nuclear fuel by January 31, 1998.

(2) Nothing in this subsection shall be read to require a contract holder to waive any future claim against the United States arising out of the Secretary’s failure to meet any new obligation assumed under settlement agreement or backup storage agreement.

(e) SOURCE OF FUNDS.—Notwithstanding section 302(d) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10222(d)), the Secretary may not make expenditures from the Nuclear Waste Fund for any costs that may be incurred by the Secretary pursuant to a settlement agreement or backup storage contract under this Act except—

- (1) the cost of acquiring and loading spent nuclear fuel casks;
- (2) the cost of transporting spent nuclear fuel from the contract holder’s site to the repository; and
- (3) any other cost incurred by the Secretary pursuant to a settlement agreement or backup storage contract that would have been incurred by the Secretary under the contracts entered into under section 302(a) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10222(a)) notwithstanding their amendment pursuant to this Act.

(f) SAVINGS CLAUSE.—(1) Nothing in this section shall limit the Secretary’s existing authority to enter into settlement agreements or address shutdown reactors and any associated public health and safety or environmental concerns that may arise.

(2) Nothing in this Act modifies or alters obligations imposed upon the Federal Government by the United States District Court of Idaho in an order entered on October 17, 1995 in *United States v. Batt* (No. 91–0054–S–EJL).

SEC. 106. ACCEPTANCE SCHEDULE.

The acceptance schedule shall be implemented in accordance with the following:

(1) PRIORITY RANKING.—Acceptance priority ranking shall be determined by the Department’s ‘Acceptance Priority Ranking’ report.

(2) ACCEPTANCE RATE.—Beginning in the year of the issuance of a license to receive and possess spent nuclear fuel and high-level radioactive waste under section 101(c), the Secretary’s acceptance rate for spent nuclear fuel shall be no

less than the following: 1,200 Metric Tons Uranium (MTU) in year 1 and 1,200 MTU in year 2, 2,000 MTU in year 3 and 2,000 MTU in year 4, 2,700 MTU in year 5, and 3,000 MTU annually thereafter.

(3) OTHER ACCEPTANCE.—Subject to the conditions contained in the license to receive and possess spent nuclear fuel and high-level radioactive waste issued under section 101(c), of the amounts provided for in paragraph (2) for each year, not less than one-sixth shall be—

(A) spent nuclear fuel or civilian high-level radioactive waste of domestic origin from civilian nuclear power reactors have permanently ceased operation on or before the date of enactment of the Nuclear Waste Policy Act Amendments of 1999;

(B) spent nuclear fuel from foreign research reactors, as necessary to promote nonproliferation activities; and

(C) spent nuclear fuel and high-level radioactive waste from research and atomic energy defense activities, including spent nuclear fuel from naval reactors:

Provided, however, That the Secretary shall accept not less than 7.5 percent of the total quantity of fuel and high-level radioactive waste accepted in any year from the categories of radioactive materials described in subparagraphs (B) and (C) in paragraph (3). If sufficient amounts of radioactive materials are not available to utilize this allocation, the Secretary shall allocate this acceptance capacity to other contract holders.

(4) EFFECT ON SCHEDULE.—The contractual acceptance schedule shall not be modified in any way as a result of the Secretary's acceptance of any material other than contract holders' spent nuclear fuel and high-level radioactive waste.

TITLE II—TRANSPORTATION

SEC. 201. TRANSPORTATION PLANNING.

(a) TRANSPORTATION READINESS.—The Secretary—

(1) shall take such actions as are necessary and appropriate to ensure that the Secretary is able to transport safely spent nuclear fuel and high-level radioactive waste from any site where such spent nuclear fuel or high-level radioactive waste is generated or stored to the Yucca Mountain site, using routes that minimize, to the maximum practicable extent consistent with Federal requirements governing transportation of hazardous materials, transportation of spent nuclear fuel and high-level radioactive waste through populated areas; and

(2) as soon as is practicable following the enactment of this Act, the Secretary shall, in consultation with the Secretary of Transportation and affected States and tribes, and after an opportunity for public comment, develop and implement a comprehensive management plan that ensures safe transportation of spent nuclear fuel and high-level radioactive waste from the sites designated by the contract holders to the Yucca Mountain site.

(b) TRANSPORTATION PLANNING.—In conjunction with the development of the logistical plan in accordance with subsection (a), the Secretary shall update and modify, as necessary, the Secretary's transportation institutional plans to ensure that institutional issues are addressed and resolved on a schedule to support the commencement of transportation of spent nuclear fuel and high-level radioactive waste to the Yucca Mountain site no later than December 31, 2006. Among other things, such planning shall provide a schedule and process of addressing and implementing, as necessary, transportation routing plans, transportation contracting plans, transportation training in accordance with section 202, public education regarding transportation of spent nuclear fuel and high-level radioactive waste, and transportation tracking programs.

(c) SHIPPING CAMPAIGN TRANSPORTATION PLANS.—

(1) IN GENERAL.—The Secretary shall develop a transportation plan for the implementation of each shipping campaign (as that term is defined by the Secretary) from each site at which spent nuclear fuel or high-level nuclear waste is stored, consistent with the principles and procedures stated in Department of Energy Order No. 460.2 and the Program Manager's Guide.

(2) REQUIREMENTS.—A shipping campaign transportation plan shall—

(A) be fully integrated with State and tribal government notification, inspection, and emergency response plans along the preferred shipping route or State-designated alternative route identified under subsection (d) (unless the Secretary certifies in the plan that the State or tribal government has failed to cooperate in fully integrating the shipping campaign transportation plan with the applicable State or tribal government plans); and

(B) be consistent with the principles and procedures developed for the safe transportation of transuranic waste to the Waste Isolation Pilot Plant (unless the Secretary certifies in the plan that a specific principle or procedure is inconsistent with a provision of this Act).

(d) **SAFE SHIPPING ROUTES AND MODES.**—

(1) **IN GENERAL.**—The Secretary shall evaluate the relative safety of the proposed shipping routes and shipping modes from each shipping origin to the repository compared with the safety of alternative modes and routes.

(2) **CONSIDERATIONS.**—The evaluation under paragraph (1) shall be conducted in a manner consistent with regulations promulgated by the Secretary of Transportation under authority of chapter 51 of title 49, United States Code, and the Nuclear Regulatory Commission under authority of the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.), as applicable.

(3) **DESIGNATION OF PREFERRED SHIPPING ROUTE AND MODE.**—Following the evaluation under paragraph (1), the Secretary shall designate preferred shipping routes and modes from each civilian nuclear power reactor and Department of Energy facility that stores spent nuclear fuel or other high-level defense waste.

(4) **SELECTION OF PRIMARY SHIPPING ROUTE.**—If the Secretary designates more than 1 preferred route under paragraph (3), the Secretary shall select a primary route after considering, at a minimum, historical accident rates, population, significant hazards, shipping time, shipping distance, and mitigating measures such as limits on the speed of shipments.

(5) **USE OF PRIMARY SHIPPING ROUTE AND MODE.**—Except in cases of emergency, for all shipments conducted under this Act, the Secretary shall cause the primary shipping route and mode or State-designated alternative route under chapter 51 of title 49, United States Code, to be used. If a route is designated as a primary route for any reactor or Department of Energy facility, the Secretary may use that route to transport spent nuclear fuel or high-level radioactive waste from any other reactor or Department of Energy facility.

(6) **TRAINING AND TECHNICAL ASSISTANCE.**—Following selection of the primary shipping routes, or State-designated alternative routes, the Secretary shall focus training and technical assistance under section 202(c) on those routes.

(7) **PREFERRED RAIL ROUTES.**—

(A) **REGULATION.**—Not later than 1 year after the date of enactment of the Nuclear Waste Policy Amendment Act of 1999, the Secretary of Transportation, pursuant to authority under other provisions of law, shall promulgate a regulation establishing procedures for the selection of preferred routes for the transportation of spent nuclear fuel and high-level radioactive waste by rail.

(B) **INTERIM PROVISION.**—During the period beginning on the date of enactment of the Nuclear Waste Policy Act of 1999 and ending on the date of issuance of a final regulation under subparagraph (A), rail transportation of spent nuclear fuel and high-level radioactive waste shall be conducted in accordance with regulatory requirements in effect on that date and with this section.

SEC. 202. TRANSPORTATION REQUIREMENTS.

(a) **PACKAGE CERTIFICATION.**—No spent nuclear fuel or high-level radioactive waste may be transported by or for the Secretary under this Act except in packages that have been certified for such purposes by the Commission.

(b) **STATE NOTIFICATION.**—The Secretary shall abide by regulations of the Commission regarding advance notification of State and tribal governments prior to transportation of spent nuclear fuel or high-level radioactive waste under this Act.

(c) **TECHNICAL ASSISTANCE.**—

(1) **IN GENERAL.**—

(A) **STATES AND INDIAN TRIBES.**—As provided in paragraph (3), the Secretary shall provide technical assistance and funds to States and Indian tribes for training of public safety officials of appropriate units of State, local, and tribal government. A State shall allocate to local governments within the State a portion of any funds that the secretary provides to the State for technical assistance and funding.

(B) **EMPLOYEE ORGANIZATIONS.**—The Secretary shall provide technical assistance and funds for training directly to nonprofit employee organizations, voluntary emergency response organizations, and joint labor-management organizations that demonstrate experience in implementing and operating worker health and safety training and education programs and demonstrate the ability to reach and involve in training programs target populations of

workers who are or will be directly engaged in the transportation of spent nuclear fuel and high-level radioactive waste or emergency response or post-emergency response with respect to such transportation.

(C) TRAINING.—Training under this section—

(i) shall cover procedures required for safe routine transportation of materials and procedures for dealing with emergency response situations;

(ii) shall be consistent with any training standards established by the Secretary of Transportation under subsection (h); and

(iii) shall include—

(I) a training program applicable to persons responsible for responding to emergency situations occurring during the removal and transportation of spent nuclear fuel and high-level radioactive waste;

(II) instruction of public safety officers in procedures for the command and control of the response to any incident involving the waste; and

(III) instruction of radiological protection and emergency medical personnel in procedures for responding to an incident involving spent nuclear fuel or high-level radioactive waste being transported.

(2) NO SHIPMENTS IF NO TRAINING.—

(A) There shall be no shipments of spent nuclear fuel and high-level radioactive waste through the jurisdiction of any State or the reservation lands of any Indian tribe eligible for grants under paragraph (3)(B) until the Secretary has made a determination that personnel in all State, local, and tribal jurisdictions on primary and alternative shipping routes have met acceptable standards of training for emergency responses to accidents involving spent nuclear fuel and high-level radioactive waste, as established by the Secretary, and unless technical assistance and funds to implement procedures for the safe routine transportation and for dealing with emergency response situations under paragraph (1)(A) have been available to a State or Indian tribe for at least 3 years prior to any shipment: *Provided, however,* That the Secretary may ship spent nuclear fuel and high-level radioactive waste if technical assistance or funds have not been made available because of

(i) an emergency, including the sudden and unforeseen closure of a highway or rail line or the sudden and unforeseen need to remove spent fuel from a reactor because of an accident, or

(ii) the refusal to accept technical assistance by a State or Indian tribe, or

(iii) fraudulent actions which violate Federal law governing the expenditure of Federal funds.

(B) In the event the Secretary is required to transport spent fuel or high-level radioactive waste through a jurisdiction prior to 3 years after the provisions of technical assistance or funds to such jurisdiction, the Secretary shall, prior to such shipment, hold meetings in each State and Indian reservation through which the shipping route passes in order to present initial shipment plans and receive comments. Department of Energy personnel trained in emergency response shall escort each shipment. Funds and all Department of Energy training resources shall be made available to States and Indian tribes along the shipping route not later than three months prior to the commencement of shipments: *Provided, however,* That in no event shall such shipments exceed 1,000 metric tons per year: *Provided further,* That no such shipments shall be conducted more than four years after the effective date of the Nuclear Waste Policy Amendments Act of 1999.

(3) GRANTS.—

(A) IN GENERAL.—To implement this section, the Secretary may make expenditures from the Nuclear Waste Fund to the extent provided for in appropriation acts.

(B) GRANTS FOR DEVELOPMENT OF PLANS.—

(i) IN GENERAL.—The Secretary shall make a grant of at least \$150,000 to each State through the jurisdiction of which and each federally recognized Indian tribe through the reservation lands of which a shipment of spent nuclear fuel or high-level radioactive waste will be made under this Act for the purpose of developing a plan to prepare for such shipments.

(ii) LIMITATION.—A grant shall be made under clause (i) only to a State or a federally recognized Indian tribe that has the authority to respond to incidents involving shipments of hazardous material.

(C) GRANTS FOR IMPLEMENTATION OF PLANS.—

(i) IN GENERAL.—Annual implementation grants shall be made to States and Indian tribes that have developed a plan to prepare for shipments under this Act under subparagraph (B). The Secretary, in submitting the annual departmental budget to Congress for funding of implementation grants under this section, shall be guided by the State and tribal plans developed under subparagraph (B). As part of the Department of Energy's annual budget request, the Secretary shall report to Congress on—

(I) the funds requested by States and federally recognized Indian tribes to implement this subsection;

(II) the amount requested by the President for implementation; and

(III) the rationale for any discrepancies between the amounts requested by States and federally recognized Indian tribes and the amounts requested by the President.

(ii) ALLOCATION.—Of funds available for grants under this subparagraph for any fiscal year—

(I) 25 percent shall be allocated by the Secretary to ensure minimum funding and program capability levels in all States and Indian tribes based on plans developed under subparagraph (B); and

(II) 75 percent shall be allocated to States and Indian tribes in proportion to the number of shipment miles that are projected to be made in total shipments under this Act through each jurisdiction.

(4) AVAILABILITY OF FUNDS FOR SHIPMENTS.—Funds under paragraph (1) shall be provided for shipments to a repository, regardless of whether the repository is operated by a private entity or by the Department of Energy.

(5) MINIMIZING DUPLICATION OF EFFORT AND EXPENSES.—The Secretaries of Transportation, Labor, and Energy, Directors of the Federal Emergency Management Agency and National Institute of Environmental Health Sciences, the Nuclear Regulatory Commission, and Administrator of the Environmental Protection Agency shall review periodically, with the head of each department, agency, or instrumentality of the Government, all emergency response and preparedness training programs of that department, agency, or instrumentality to minimize duplication of effort and expense of the department, agency, or instrumentality in carrying out the programs and shall take necessary action to minimize duplication.

(d) PUBLIC EDUCATION.—The Secretary shall conduct a program to educate the public regarding the transportation of spent nuclear fuel and high-level radioactive waste, with an emphasis on those States, units of local government, and Indian tribes through whose jurisdiction the Secretary plans to transport substantial amounts of spent nuclear fuel or high-level radioactive waste.

(e) USE OF PRIVATE CARRIERS.—The Secretary, in providing for the transportation of spent nuclear fuel and high-level radioactive waste under this Act, shall contract with private industry to the fullest extent possible in each aspect of such transportation. The Secretary shall use direct Federal services for such transportation only upon a determination by the Secretary of Transportation, in consultation with the Secretary, that private industry is unable or unwilling to provide such transportation services at a reasonable cost.

(f) COMPLIANCE WITH TRANSPORTATION REGULATIONS.—Any person that transports spent nuclear fuel or high-level radioactive waste under the Nuclear Waste Policy Amendments Act of 1999, pursuant to a contract with the Secretary, shall comply with all requirements governing such transportation issued by the Federal, State and local governments, and Indian tribes, in the same way and to the same extent that any person engaging in that transportation that is in or affects interstate commerce must comply with such requirements, as required by section 5126 of title 49, United States Code.

(g) EMPLOYEE PROTECTION.—Any person engaged in the interstate commerce of spent nuclear fuel or high-level radioactive waste under contract to the Secretary pursuant to this Act shall be subject to and comply fully with the employee protection provisions of section 20109 of title 49, United States Code (in the case of employees of railroad carriers) and section 31105 of title 49, United States Code (in the case of employees operating commercial motor vehicles), or the Commission (in the case of all other employees).

(h) TRAINING STANDARDS.—

(1) REGULATION.—No later than 12 months after the date of enactment of the Nuclear Waste Policy Amendments Act of 1999, the Secretary of Transportation, pursuant to authority under other provisions of law, in consultation with the Secretary of Labor and the Commission, shall promulgate a regulation establishing training standards applicable to workers directly involved in the removal and transportation of spent nuclear fuel and high-level radioactive waste. The regulation shall specify minimum training standards applicable to workers, including managerial personnel. The regulation shall require that the employer possess evidence of satisfaction of the applicable training standard before any individual may be employed in the removal and transportation of spent nuclear fuel and high-level radioactive waste.

(2) SECRETARY OF TRANSPORTATION.—If the Secretary of Transportation determines, in promulgating the regulation required by paragraph (1), that existing Federal regulations establish adequate training standards for workers, then the Secretary of Transportation can refrain from promulgating additional regulations with respect to worker training in such activities. The Secretary of Transportation and the Commission shall, by Memorandum of Understanding, ensure coordination of worker training standards and to avoid duplicate regulation.

(3) TRAINING STANDINGS CONTENT.—(A) If training standards are required to be promulgated under paragraph (1), such standards shall, among other things deemed necessary and appropriate by the Secretary of Transportation, provide for—

(i) a specified minimum number of hours of initial off site instruction and actual field experience under the direct supervision of a trained, experienced supervisor;

(ii) a requirement that onsite managerial personnel receive the same training as workers, and a minimum number of additional hours of specialized training pertinent to their managerial responsibilities; and

(iii) a training program applicable to persons responsible for responding to and cleaning up emergency situations occurring during the removal and transportation of spent nuclear fuel and high-level radioactive waste.

(B) The Secretary of Transportation may specify an appropriate combination of knowledge, skills, and prior training to fulfill the minimum number of hours requirements of subparagraphs (i) and (ii).

(4) EMERGENCY RESPONDER TRAINING STANDARDS.—The training standards for persons responsible for responding to emergency situations occurring during the removal and transportation of spent nuclear and high level radioactive waste shall, in accordance with existing regulations, ensure their ability to protect nearby persons property, or the environment from the effects of accidents involving spent nuclear fuel and high-level radioactive waste.

(5) AUTHORIZATION.—There is authorized to be appropriated to the Secretary of Transportation, from general revenues, such sums as may be necessary to perform his duties under this subsection.

TITLE III—DEVELOPMENT OF NATIONAL SPENT NUCLEAR FUEL STRATEGY

SEC. 301. FINDINGS.

(a) Prior to permanent closure of the geologic repository in Yucca Mountain, Congress must determine whether the spent fuel in the repository should be treated as waste subject to permanent burial or should be considered an energy resource that is needed to meet future energy requirements;

(b) Future use of nuclear energy may require construction of a second geologic repository unless Yucca Mountain can safely accommodate additional spent fuel. Improved spent fuel strategies may increase the capacity of Yucca Mountain.

(c) Prior to construction of any second permanent geologic repository, the nation's current plans for permanent burial of spent fuel should be re-evaluated.

SEC. 302 OFFICE OF SPENT NUCLEAR FUEL RESEARCH.

(a) ESTABLISHMENT.—There is hereby established an Office of Spent Nuclear Fuel Research within the Office of Nuclear Energy Science and Technology of the Department of Energy. The Office shall be headed by the Associate Director, who shall be a member of the Senior Executive Service appointed by the Director of the Office of Nuclear Energy Science and Technology, and compensated at a rate determined by applicable law.

(b) ASSOCIATE DIRECTOR.—The Associate Director of the Office of Spent Nuclear Fuel Research shall be responsible for carrying out an integrated research, develop-

ment, and demonstration program on technologies for treatment, recycling, and disposal of high-level nuclear radioactive waste and spent nuclear fuel, subject to the general supervision of the Secretary. The Associate Director of the Office shall report to the Director of the Office of Nuclear Energy Science and Technology. The first such Associate Director shall be appointed within 90 days of the enactment of the Nuclear Waste Policy Act of 1999.

(c) GRANT AND CONTRACT AUTHORITY.—In carrying out his responsibilities under this Section, the Secretary may make grants, or enter into contracts, for the purpose of the research projects and activities described in (d)(2).

(d)(1) DUTIES.—The Associate Director of the Office shall involve national laboratories, universities, the commercial nuclear industry, and other organizations to investigate technologies for the treatment, recycling, and disposal of spent nuclear fuel and high-level radioactive waste.

(2) The Associate Director of the Office shall:

(A) develop a research plan to provide recommendations by 2015;

(B) identify promising technologies for the treatment, recycling, and disposal of spent nuclear fuel and high-level radioactive waste;

(C) conduct research and development activities for promising technologies;

(D) ensure that all activities include as key objectives minimization of proliferation concerns and risk to the health of the general public or site workers, as well as development of cost-effective technologies;

(E) require research on both reactor- and accelerator-based transmutation systems;

(F) require research on advanced processing and separations;

(G) encourage that research efforts include participation of international collaborators;

(H) be authorized to fund international collaborators when they bring unique capabilities not available in the United States and their host country is unable to provide for their support;

(I) ensure that research efforts with this Office are coordinated with research on advanced fuel cycles and reactors conducted within the Office of Nuclear Energy Science and Technology.

(e) REPORT.—The Associate Director of the Office of Spent Nuclear Fuel Research shall annually prepare and submit a report to the Congress on the activities and expenditures of the office that discusses progress being made in achieving the objectives of paragraph (b).

PURPOSE OF THE MEASURE

The bill reported by the Committee provides for the completion of siting and licensing activities for a permanent geologic repository at Yucca Mountain, including a facility for the early receipt of spent fuel and nuclear waste that is keyed to the Nuclear Regulatory Commission (NRC) construction license for the permanent repository. The bill also provides a mechanism for the resolution of lawsuits over the failure of the Department of Energy to perform its obligation to move and safely store spent nuclear fuel and nuclear waste.

SUMMARY OF MAJOR PROVISIONS

The Nuclear Waste Policy Amendments Act of 1999, provides for (1) operation of a repository fuel acceptance facility keyed to NRC construction authorization for the permanent repository, which is expected to be granted before 2007; (2) a radiation protection standard for the repository set by the NRC consistent with the National Academy of Sciences recommendations; (3) a requirement for Congressional approval to raise the Nuclear Waste Fee; (4) authorization for the settlement of the lawsuits, with a prohibition on using the Nuclear Waste Fund to settle the lawsuits (except for costs that would otherwise be incurred as part of the permanent repository program); and (5) transportation provisions based on the

Waste Isolation Pilot Plant model. In addition, the bill provides for the establishment of an Office of Spent Nuclear Fuel Research.

BACKGROUND AND NEED

General

Nuclear power plants, which provide 20% of the United States electric generating capacity, burn small uranium pellets which are loaded into rods within the reactor. Approximately every 18 months, a reactor is refueled, at which time between one-fourth and one-third of the reactor's fuel, which has become inefficient, or "spent," is removed. All nuclear reactors were designed with on-site storage pools that were intended to serve as temporary storage while the highly radioactive fuel cooled before transport to a permanent storage site. However, because no permanent storage site exists, the reactors have been forced to retain spent fuel in their storage pools indefinitely. A typical nuclear plant produces about 30 tons of spent fuel a year. At this time, over 40,000 metric tons of spent fuel is now in temporary storage at nuclear power plants at 71 sites across the country. The fuel is very dense: all of the spent fuel produced by all of America's nuclear plants over the last 30 years would cover only an area the size of a football field to a depth of about three yards.

In addition to the commercial nuclear power industry, the Federal government has produced spent nuclear fuel and high-level nuclear waste through defense and research activities. Research reactors owned by the Department of Energy (DOE) and universities produce spent nuclear fuel that is currently stored at DOE sites across the country. However, most of the fuel at DOE sites is from reactors at the Hanford and Savannah River Sites that produced materials for DOE's nuclear weapons program. These reactors are no longer operating. The fuel from the weapons facilities was intended to be processed to extract weapons-grade materials, and as a result, most must be stabilized in some manner before it can be safely stored for long periods of time.

Also, since 1957, spent nuclear fuel from nuclear-powered naval vessels and naval reactor prototypes has been transported to the Naval Reactors Facility at the Idaho National Engineering Laboratory (INEL) for testing and examination, where it is then stored by DOE. In the course of litigation over the State of Idaho's attempt to stop the importation of further waste into the state, a court order was issued on December 22, 1993 that allowed only a limited number of shipments of spent fuel to Idaho pending the completion of an environmental impact statement (EIS) by DOE. In April, 1995, DOE completed an EIS that confirmed DOE's plan to store spent naval fuel at INEL. The State of Idaho contested the adequacy of the EIS and objected to further shipments. On October 16, 1995, the State of Idaho, DOE and the Navy entered into a settlement agreement that allows limited shipments of navy fuel to Idaho in return for DOE's commitment to remove the fuel by January 1, 2035.

In addition to spent fuel, high-level nuclear waste has also been produced by defense activities. High-level waste is the highly radioactive waste material that results from the chemical reprocessing

of spent nuclear fuel and irradiated targets. Government operations from 1944 to the present have generated approximately 398,700 cubic meters of high-level waste at four sites—the Hanford Site, INEL, the Savannah River Site, and the West Valley Demonstration Project. The Hanford facility alone has 61 million gallons of high-level radioactive waste in 177 tanks. DOE plans to stabilize these wastes by transforming them into a glass-like material, through a process called vitrification. DOE estimates that, depending upon canister design and waste composition, approximately 30,000 canisters of vitrified high-level waste may require disposal.

The Nuclear Waste Policy Act and amendments

In 1982, Congress adopted the Nuclear Waste Policy Act (NWPA), which required the DOE to design and implement a system to dispose of spent nuclear fuel in a permanent geologic repository. The NWPA required DOE to begin accepting spent fuel from commercial reactors at a repository by 1998. In 1985, the President determined that defense-related spent fuel held by DOE could be emplaced within the permanent repository. To fund the project, Congress ordered that the Department of Energy collect a fee of one mill (one-tenth of one cent) per kilowatt hour on electricity generated by nuclear energy. The fee is collected by utilities from their ratepayers in their monthly bills and placed into a special “Nuclear Waste Fund” in the Treasury. The Fund receives over half a billion dollars per year from collections and \$300 million per year in interest on the unobligated balance. To date, more than \$13 billion in fees and interest has been placed in the Fund, with over a billion dollars more in fees accrued, but not yet paid. In addition, funds are appropriated annually from the Defense Programs budget at DOE to the nuclear waste disposal program to pay for the disposal of defense spent fuel and waste.

By 1987, DOE had focused on potential sites for a geologic repository in Texas, the State of Washington, and Yucca Mountain, Nevada, as well as several sites in the eastern U.S. In the Nuclear Waste Policy Amendments Act of 1987 (NWPAA), Congress reaffirmed that DOE should construct a geologic repository, and instructed DOE to study the suitability of only the Yucca Mountain site. Due to litigation over the attempts of the State of Nevada to stop the study of Yucca Mountain, DOE was unable to begin site characterization activities until 1991. Although the management of the Yucca Mountain site characterization program has been frequently criticized in the past, management reforms in recent years have produced a much more efficient program. For example, despite a reduction in funding, the five mile loop tunnel at the Exploratory Studies Facility in Yucca Mountain was completed ahead of the original schedule.

Although DOE will have spent over \$6 billion through the second quarter of fiscal year 1999 on the program, DOE failed to meet the 1998 deadline for the acceptance of spent nuclear fuel. On December 12, 1998, DOE issued the “Viability Assessment of a Repository at Yucca Mountain,” which concluded that the scientific data collected by DOE reveals no “showstoppers.” The current “Civilian Radioactive Waste Management Program Plan, Revision 2” calls for the recommendation of a repository site to the President in 2001,

and the submission of a repository license application to the Nuclear Regulatory Commission in 2002.

Litigation

In the meantime, many state regulators and utilities have become quite angry with the current situation, in which they are required to collect money from consumers to fund a DOE waste program which will not accept waste any time in the immediate future. At the same time, the utilities are faced with growing expenses for on-site storage or for a private storage facility. When DOE admitted that it would be unable to take spent fuel in 1998, a group of state regulatory agencies, nuclear utilities and state Attorneys General sued DOE for failure to perform under its contracts entered into under the NWPA. On July 23, 1996, the U.S. Court of Appeals for the District of Columbia Circuit ruled that section 302(a)(5)(B) of the Nuclear Waste Policy Act “creates an obligation in DOE, reciprocal to the utilities obligation to pay, to start disposing of the [spent nuclear fuel] no later than January 31, 1998.” The Court found that it was premature to determine the appropriate remedy, as DOE has not yet defaulted upon its obligation. DOE did not appeal the Court’s decision.

On December 17, 1996, DOE sent a letter to all nuclear plant owners, indicating that DOE would be unable to fulfill its obligation. On January 31, 1997, in light of the contents of this letter, a new lawsuit was filed against DOE. In November, 1997, the Court of Appeals for the District of Columbia Circuit ruled that DOE has an unconditional obligation to move nuclear waste in 1998. The Court also ruled that DOE cannot avoid paying damages by claiming: (1) that it cannot take spent fuel until it has a permanent repository, or (2) that its failure was an “unavoidable delay” under the contract. However, the Court also ruled that utilities have *potentially* adequate remedies under their contracts with DOE and did not order DOE to begin taking fuel. Subsequently, DOE and the utilities appealed the decision to the Supreme Court, but the Supreme Court refused to review the opinion of the D.C. Circuit Court, letting the decision stand as is.

Ten utilities have filed claims for damages at the Court of Claims. The claims in these cases total over \$8.5 billion. In November, the Court of Claims ruled in three of the cases that DOE owes the utilities damages. The amount of damages will be decided in separate hearings. So far, the utilities that have won their cases in the Court of Claims have shut down reactors and no longer pay the per kilowatt hour nuclear waste fee. For one of the remaining seven utilities, the Court of Claims has ruled that, as a utility that continues to pay the Nuclear Waste Fee, it should pursue contract remedies with DOE. The contract process will likely result in some credit to the nuclear waste fee. The utilities are arguing that this is an inadequate remedy. Other cases are pending in the U.S. Court of Appeals and the U.S. District Court. Whether the remedy is monetary damages from the Courts, or credit to the nuclear waste fee from DOE, the Federal budget impact will be substantial. The nuclear industry estimates the Federal government’s liability to the \$50 billion or more. Secretary Bill Richardson, of the Department of Energy, has proposed that DOE meet its obligation under

the contracts by taking title to the spent nuclear fuel, with DOE assuming responsibility for continued storage of the fuel at the re-active sites will a permanent repository is available to receive the spent fuel.

Interim storage

As it became clear that a permanent repository would not open by the 1998 deadline, the 1987 NWPA established the Office of the Nuclear Waste Negotiator, which was established to find a volunteer state or Indian tribe to host a temporary storage facility, referred to as a “monitored retrievable storage” facility or “MRS.” Although several Indian tribes applied for study grants, due to state and Congressional intervention in the process, the program was unable to make progress in siting an MRS. Although funds has been appropriated for the Office through the end of FY ’95, under the terms of the NWPA, the Office terminated on December 22, 1994.

Although the NWPA provided for the recommendation of multiple MRS sites to Congress, the NWPA authorized one MRS, but “linked” it to the siting of the permanent repository. The NWPA provides that DOE cannot select an MRS site until the Secretary has recommended that a permanent repository be built at Yucca Mountain, and cannot begin construction of an MRS until the NRC has issued a construction authorized for the permanent repository. The NWPA prohibited the construction of that MRS in Nevada.

By 2010, DOE’s rather optimistic target date for opening a permanent repository, a total of eighty-five reactors will be out of room in their spent fuel storage pools. Thus, many utilities with limited space in their storage pools have begun to search for alternative storage facilities. At this time, twenty-three utilities have licenses for on-site dry canister storage at the reactors. In 1994, Northern States Power Company (NSP) was forced to apply for approval from the Minnesota State Legislature for on-site dry storage for its spent nuclear fuel at its Prairie Island facility. Although NSP eventually won permission to store the spent fuel on-site, it was only after a long high-profile battle in the state legislature. The permission for on-site storage was limited, meaning that NSP will run out of space, and be faced with shutting down the reactors, in 2007. NSP, along with 33 other utility and 2 contractor partners, began negotiations with the Mescalero Indian Tribe regarding the siting of a privately funded storage facility on tribal lands. Although these negotiations are not proceeding, a similar group of utilities has filed a license application to build a private storage facility on land owned by the Skull Valley Goshute Tribe in Utah. Privately funded storage could be constructed as long as the facility met Nuclear Regulatory Commission certification standards.

In 1995, the County Commission of Lincoln County, Nevada, a county adjacent to the Yucca Mountain site, passed a resolution inviting DOE to build a spent fuel cask handling facility and temporary storage facility in Lincoln County in return for specified payments and benefits to the county. Under the proposal, spent fuel casks would be removed from the Union Pacific Railroad line in Elgin, Nevada, and stored there. If Yucca Mountain is deemed a suitable site for a permanent repository, under the proposal, a

heavy-haul road could be constructed to truck the casks of spent fuel to the Yucca Mountain site. The state government in Nevada, which has been constant in its objections to the Yucca Mountain project, filed civil and criminal lawsuits against the Lincoln County Commissioners for making the proposal. These lawsuits have since been settled.

Permanent disposal standards

The Energy Policy Act of 1992 required a review by the National Academy of Sciences (NAS) of technical bases for public health and safety standards applicable to a repository at Yucca Mountain. Based upon this report, the Environmental Protection Agency is required to set standards for disposal of spent fuel at Yucca Mountain. Specially, the NAS was asked to determine whether it is possible to predict whether a geologic repository will be unbreached for a 10,000 year period. The NAS report was issued in August, 1995, and among other things, concluded that although the physical and geologic processes at Yucca Mountain are predictable enough to allow the future performance of the repository to be assessed, the time of maximum releases from a repository maybe well after the 10,000 year timeframe. Finally, the NAS panel concluded that a risk-based standard for releases is called for, but that it is up to policy-makers to decide what level of risk is acceptable for people in the "critical group" living near the repository.

At the time of this report, the EPA has not issued a proposed rule setting that radiation protection standards for the permanent repository. Pursuant to the requirements of section 121 of the NWPA, and citing the short amount of time available before a license application for the permanent repository is due to be completed, the NRC has issued proposed licensing requirements, including a radiation protection standard, under Part 63 of its regulations. Due to the politicization of nuclear issues in general, and nuclear waste disposal in particular, it necessary that the technical analysis of what level of releases comport with a given level of risk be set by an independent, bi-partisan body such as the NRC. The 25 millirem value set by the NRC in its proposed rule is consistent with existing limits for monitored retrievable storage and independent spent fuel storage installations (10 C.F.R. Part 72) and low-level waste facilities (10 C.F.R. Part 61). At the Committee's March 24, 1999, hearing, Chairman Shirley Jackson of the NRC testified that the 25 millirem value is also within the international constraints that allocate doses from high-level waste disposal to between 10 and 30 international constraints that allocate doses from high-level waste disposal to between 10 and 30 millirem/year and is comparable to the risk recommended by the National Academy of Sciences for Yucca Mountain.

LEGISLATIVE HISTORY

In 1996, S. 1271, the "Nuclear Waste Policy Act of 1996," introduced by Senator Craig, was reported by the Committee with an amendment in the nature of a substitute on March 29, 1996 (S. Rept. 104-248). For procedural reasons, on July 9, S. 1936, a bill containing the text of S. 1271 as reported out of Committee, was introduced and placed on the Senate Legislative Calendar. The

Senate passed S. 1936 on July 31, 1996 by a 63 to 37 vote. The President threatened to veto the legislation. No further action was taken on the legislation by the House. S. 104 is identical to S. 1936, as it passed the Senate in the 104th Congress.

S. 104 was introduced on January 21, 1997 by Senator Murkowski for himself, Senator Craig, Senator Grams, and sixteen other cosponsors. The Committee on Energy and Natural Resources met in open business session on March 12 and 13, 1997, to consider S. 104, and on March 13, 1997, by a majority vote ordered favorably reported S. 104, as amended. On April 14, 1997, the Senate passed S. 104 by a 65 to 34 vote. On October 30, 1998, the House passed H.R. 1270 by a 307–120 vote.

On March 5, 1998, the House ruled that S. 104 was a revenue measure and contravened the constitutional requirement that revenue measures originate in the House and returned the bill to the Senate. On February 23, 1998, H.R. 1270 was received in the Senate. On June 2, 1998, the Senate failed to invoke cloture on the motion to proceed to H.R. 1270 by a 56–39 vote. No further action on the legislation was taken in the 105th Congress.

On March 15, Senators Murkowski, Craig, Grams and Crapo introduced S. 608, “The Nuclear Waste Policy Act of 1999.”

On Wednesday, March 24, 1999, the Senate Committee on Energy and Natural Resources held a hearing on nuclear waste disposal policy, including S. 608.

The Committee on Energy and Natural Resources met in open business session on June 16, 1999, to consider “The Nuclear Waste Policy Amendments Act of 1999, an original bill and by a majority vote ordered favorably reported the original bill.

COMMITTEE RECOMMENDATION AND TABULATION OF VOTES.

The Senate Committee on Energy and Natural Resources, in open business session on June 16, 1999, by majority vote of a quorum present recommends that the Senate pass this original bill.

During the Committee’s consideration of the bill, a roll call vote was taken on an amendment in the nature of a substitute to the bill. The vote was taken in open business session, has been announced publicly by the Committee, and is included in the minutes of the session.

The roll call vote on the motion to report the original bill was 14 yeas, 6 nays as follows:

YEAS	NAYS
Murkowski	Bingaman
Domenici	Akaka
Nickles	Dorgan
Craig	Wyden *
Campbell	Johnson *
Thomas	Bayh

Smith
 Bunning
 Fitzgerald
 Gorton
 Burns *
 Graham
 Landrieu
 Lincoln

* Indicates voted by proxy.

SECTION-BY-SECTION ANALYSIS

SECTION 1. SHORT TITLE

The Act is to be cited as the “Nuclear Waste Policy Amendments Act of 1999”.

SECTION 2. DEFINITIONS

This section adopts definitions used in the Nuclear Waste Policy Act of 1982.

TITLE I—STORAGE AND DISPOSAL

SECTION 101. PROGRAM SCHEDULE

This section sets forth the schedule for decisions regarding the permanent repository at Yucca Mountain. The dates set forth are consistent with the Department of Energy’s (DOE) existing schedule for Yucca Mountain.

Subsection (c) also requires the Secretary to submit to the Nuclear Regulatory Commission (NRC) an application for a license for surface facilities to receive and possess spent fuel and high-level waste at the Yucca Mountain site at the same time as the submission of the application for the construction authorization for the permanent repository. If the application for surface facilities meets the NRC’s requirements, the NRC is required to issue a license for surface facilities concurrent with the issuance of the construction authorization for Yucca Mountain, or as soon as practicable thereafter. These provisions should result in the acceptance of spent fuel and nuclear waste at the Yucca Mountain site by 2007.

SECTION 102. BACKUP STORAGE CAPACITY

This section authorizes the Secretary to enter into an agreement with a utility that is unable to build adequate on-site storage for spent fuel. The provision authorizes the Secretary to take title to the fuel at the reactor site and give priority to the transportation of the fuel when the early acceptance facility at Yucca Mountain becomes available, or transport the fuel to a private, NRC-licensed independent fuel storage facility.

SECTION 103. RADIATION PROTECTION STANDARD

This section authorizes the NRC to set a radiation protection standard consistent with the proposed NRC rule for Yucca Mountain. (64 Fed. Reg. 8640 (Feb. 22, 1999)).

SECTION 104. NUCLEAR WASTE FEE

The Nuclear Waste Policy Act of 1982 allowed the Secretary of Energy to adjust the Nuclear Waste Fee, subject to the disapproval of either house of Congress. Such “one-house” veto provisions were subsequently held to be unconstitutional. This section clarifies that an adjusted fee proposed by the Secretary shall only be effective upon enactment of a joint resolution by Congress.

SECTION 105. SETTLEMENT AGREEMENT

This section authorizes the Secretary of Energy to enter into settlement agreements to resolve claims relating to the Secretary’s failure to dispose of spent nuclear fuel and high-level waste beginning not later than January 31, 1998, as required by the Nuclear Waste Policy Act of 1982. The Secretary may settle the claims by taking title to the fuel at the reactor sites, providing storage casks to the contract holder; or compensate the contract holder for his costs of on-site storage. The section prohibits expenditures from the Nuclear Waste Fund for settlement purposes, except for the cost of acquiring and loading spent nuclear fuel casks, the cost of transporting spent nuclear fuel to the repository, and any other cost that the Secretary would have incurred under the contracts entered into under the Nuclear Waste Policy Act of 1982. This section also clarifies that nothing in this Act modifies obligations imposed on the Federal Government by the United States District Court of Idaho in an order entered on October 17, 1995 in *United States v. Batt* (No. 91-0054-S-EJL).

SECTION 106. ACCEPTANCE SCHEDULE

This section requires that the acceptance schedule shall be implemented in accordance with the acceptance priority ranking determined by the Department’s annual “Acceptance Priority Ranking” report. It requires that the Secretary’s spent fuel emplacement rate shall be no less than 1,200 MTU in years 1 and 2; 2,000 MTU in years 3 and 4; 2,700 MTU in year 5; and 3,000 MTU annually thereafter. This section also provides that no less than one-sixth of the fuel accepted shall be spent nuclear fuel or high level waste from shut down civilian reactors, foreign research reactors, and research and atomic energy defense activities, with a minimum of 7.5% of the total quantity accepted from the latter two categories.

TITLE II—TRANSPORTATION

This title carries forward the transportation provisions contained in S. 608. These provisions provide special considerations for routing decisions, funding and curricula for training of transportation personnel and emergency responders, and grants for state and local governments and Indian tribes along the transportation routes. These provisions are modeled upon those in place for transportation of material to the Waste Isolation Pilot Plant.

SECTION 201. TRANSPORTATION PLANNING

This section requires the Secretary to take those action necessary to ensure the ability to transport fuel and waste from sites des-

ignated by contract holders to the repository developed under the Act. In addition, this section specifies regulatory requirements governing such transportation that are intended to augment the existing regulatory regime governing radioactive materials transportation and further protect the public safety.

Subsection (a)(1) requires the Secretary to take those actions necessary to ensure the ability to transport safely fuel and waste from facilities where it is generated or stored to the Yucca Mountain site. This paragraph further requires that all such transportation shall take place using routes that minimize, to the maximum practicable extent consistent with Federal requirements, transportation of fuel and waste through populated areas.

Subsection (a)(2) requires the Secretary, in consultation with the Secretary of Transportation and affected States and tribes, to develop and implement a comprehensive management plan that ensures the safe transportation of fuel and waste from sites designated by contract holders to the Yucca Mountain site. The management plan would address, among other things, transportation logistical issues, schedules, routes, and other transportation requirements specified in this Act.

Subsection (b) requires the Secretary, in conjunction with the development of the management plan, to update and modify, as necessary, the Secretary's institutional plans to ensure the resolution of outstanding institutional issues on a schedule that supports the commencement of transportation of fuel and waste to the permanent repository no later than December 31, 2006. Specific institutional issues that should be addressed and implemented are identified, including transportation routing plans, transportation contracting plans, transportation training in accordance with section 202, public education regarding transportation of fuel and waste, and transportation tracking programs.

Subsection (c)(1) requires the Secretary to develop a transportation plan for the implementation of each "shipping campaign" as that term is defined by the Secretary, from each site at which fuel and waste is stored. The transportation plan must be developed in accordance with DOE Order No. 460.2, which specifies DOE policies and requirements governing materials transportation and packaging operations, and which generally requires compliance with all applicable Federal, state, local and tribal requirements governing materials transportation that are consistent with Federal requirements. The transportation plan must also be consistent with the requirements stated in the Program Manager's Guide.

Subsection (c)(2) specifies additional requirements that the shipping campaign transportation plan must satisfy. Specifically, subsection (c)(2)(A) requires that the transportation plan be fully integrated with State and tribal government notification, inspection and emergency response plans along the primary route (including any portion thereof that is a State-designated alternative route selected in accordance with DOT regulations) designated by the Secretary in accordance with subsection (d). Subsection (c)(2)(B) requires that the transportation plan be consistent with the principles and procedures developed for the safe transportation of transuranic waste to the Waste Isolation Pilot Plant, unless the Secretary demonstrates that a specific principle or procedure is in-

consistent with a provision of this Act. Although the Committee believes that the principles and procedures developed by DOE, in conjunction with affected jurisdictions, for the shipment of waste to WIPP provide an excellent model for the development of similar principles and procedures governing shipments of fuel and waste under this Act, it also recognizes that there are differences between the WIPP program and the Integrated Management System in terms of the materials to be shipped and the governing regulatory regime. Accordingly, this subsection directs the Secretary to develop a shipping campaign transportation plan that is consistent with the principles and procedures governing shipments to the WIPP, but provides the Secretary the discretion to deviate from the WIPP procedures if the Secretary demonstrates that a specific WIPP principle or procedure is inconsistent with a provision of this Act.

Subsection (d) provides standards and procedures that the Secretary must comply with in selecting shipping routes and modes. This section is intended to enhance the safety of the transportation by both rail and highway of spent nuclear fuel and high-level radioactive waste under this Act. These additional requirements are intended to be consistent with and supplement the existing regulatory regime governing fuel and waste shipments by the Secretary under this Act.

Subsection (d)(1) requires the Secretary to evaluate the relative safety of proposed shipping routes and shipping modes from each origin point to the repository with the safety of alternative modes and routes.

Subsection (d)(2) requires that the evaluation of proposed routes and modes be conducted consistent with applicable DOT and NRC regulations. This provision makes clear that any proposed route or mode selected by DOT must meet all applicable DOT and NRC regulations.

Subsection (d)(3) requires the Secretary, following the evaluation of proposed routes and modes, to designate preferred shipping routes and modes from each origin point of fuel and waste (including reactor sites and DOE facilities) to the repository. These preferred routes and modes also must comply with DOT and NRC regulations.

Pursuant to Subsection (c)(4), if the Secretary designates more than one preferred shipping route, the Secretary must conduct an evaluation to support the selection of a primary route from among the preferred routes. The evaluation must consider, at a minimum, historical accident rates, population, significant hazards, shipping time, shipping distance, and mitigating measures such as limits on the speed of shipments.

Subsection (d)(5) makes clear that, following selection of a primary shipping route (which, with respect to highway routes, would include any alternative route designated by a State in accordance with applicable DOT requirements) and mode, the Secretary must use such primary route and mode except in cases of emergency. In addition, if the Secretary selects a primary route for any reactor or DOE facility, the Secretary may use that primary route to transport fuel and waste from any other reactor or DOE facility.

Subsection (d)(6) requires the Secretary to focus training and technical assistance required under section 202(c) on primary shipping routes. Again, with respect to primary highway routes, such training and assistance shall also be provided along the State-designated alternative portion of the route.

Subsection (d)(7) requires the Secretary of Transportation, within one year of the date of enactment of the Act, to exercise authority under existing law to promulgate a regulations establishing procedures for the selection of preferred routes for the transportation of fuel and waste by rail. The Committee believes that a Federal rail routing regulation, similar to the DOT's regulation governing the selection of highway routes for shipments of fuel and waste, would provide necessary guidance to the Secretary in selecting and evaluating potential rail routes and further enhance the safety of these shipments. However, recognizing that the current regulatory regime does provide requirements governing the rail transportation of fuel and waste, and that this regime has proven successful in ensuring safe rail transportation of these material, this section provides that during the period following the date of enactment of the Act and the issuance of a final rail routing regulation, transportation of fuel and waste shall be conducted in accordance with the regulatory requirements in effect on the date of enactment and the requirements of this Act.

SECTION 202. TRANSPORTATION REQUIREMENTS

Subsection (a) and (b) of section 202 require NRC certification of packages used for shipments of fuel and waste under this Act, and the required provision of advance notification to States and tribal government of shipments in accordance with NRC regulations.

Subsection (c)(1)(A) requires the Secretary to provide technical and financial assistance to States and Indian tribes for training of public safety officials of appropriate units of State, local, and tribal government. This provision clarifies that the assistance and funds shall be made available directly to States and tribes, and that States shall allocate a portion of any funds provided to local governments. Technical assistance and funds must be provided pursuant to the grant provision of subsection (c)(3).

Subsection (c)(1)(B) requires that the Secretary also provide technical assistance and funds for training directly to nonprofit employee organizations and joint labor-management organizations that demonstrate experience in implementing and operating worker health and safety training and education programs and demonstrate the ability to reach and involve in training programs workers who are or will be directly engaged in the transportation of fuel and waste, or emergency response or post-emergency response with respect to such transportation.

Subsection (c)(1)(C) specifies the scope and content of the training that must be provided under this section, and requires that the training be consistent with training standards established by the Secretary of Transportation under subsection (g) of this section. The training must cover procedures required for the safe routine transportation of fuel and waste, as well as procedures for dealing with emergency response situations. In addition, the training must include a training program for responding to emergency situations

occurring during the removal and transportation of fuel and waste, the instruction of public safety officers in procedures for the command and control of the response, and instruction of radiological protection and emergency medical personnel in response procedures.

Subsection (c)(2) provides that, with certain specified exceptions, there shall be no shipments of fuel or waste through the jurisdiction of any State or reservation lands of any tribe eligible for grants under subsection (c)(3) unless technical assistance and funds for dealing with safe routing transportation and emergency response situations have been available to the State or tribe for at least three years prior to the shipments. This provision is consistent with DOE's current plans, which recommend that technical assistance and funds be provided to States and tribes approximately three years prior to shipment. Under the exceptions, DOE may ship fuel and waste where technical assistance and funds have not been available for three years prior to the shipment where such shipment is necessary due to an emergency (including the sudden and unforeseen closure of a highway or rail line or the sudden and unforeseen need to remove fuel from a reactor); the State or Tribe's refusal to accept technical assistance; or fraudulent actions which violate federal law governing the expenditure of federal funds.

Subsection (c)(2)(B) provides conditions that must be satisfied in the event transportation of fuel and waste takes place pursuant to one of the exceptions. The Secretary shall, prior to the shipment, hold meetings in each State or Indian reservation through which the shipping route passes in order to present initial shipment plans and receive comments; shipments shall be escorted by DOE personnel trained in emergency response; and funds and DOE training resources shall be made available to States and tribes along the route no later than three months prior to the shipments. This subsection further provides that ship shipments shall not exceed 1,000 MTU per year, and that no such shipments shall take place more than four years after the effective date of the Act.

Subsection (c)(3) covers the provision of grants to implement this section. Subsection (c)(3)(B) provides that the Secretary shall make a grant of at least \$150,000 to each State through the jurisdiction of which and each federally recognized Tribe through the reservation lands of which a shipment of fuel or waste will be made under this Act for the purpose of developing a plan to prepare for such shipments. And such grant shall be made only to a State or federally recognized Tribe that has the authority to respond to incidents involving shipments of hazardous material.

Subsection (c)(3)(C) provides for grants to implement the plans developed by the States and tribes with the grants provided under subsection (c)(3)(B). Subsection (c)(3)(C)(i) provides that annual implementation grants shall be made to States and tribes that have developed a plan for shipments. The Secretary is required, in submitting annual department budgets to Congress for the funding of implementation grants, to be guided by the State and tribal plans. In addition, as part of the DOE's annual budget requests, the Secretary shall report to Congress on the amount of funds requested by the States and tribes, the amount requested by the President for

implementation, and the rational for any discrepancies between the two amounts.

Subsection (c)(3)(C)(ii) specifies the manner in which the Secretary is to allocate funds made available for grants in any fiscal year: 25% shall be allocated to ensure minimum funding and program capability levels in all States and tribes on the plans developed by such States and tribes and 75% shall be allocated to States and tribes in proportion to the number of shipment miles projected to be made in total shipments through each jurisdiction.

Subsection (c)(4) clarifies and provides that funds available under paragraph (1) shall be made available to prepare for shipments to a permanent repository, regardless of whether the repository is operated by a private entity or the DOE.

Subsection (d) requires that the Secretary conduct a program to educate the public regarding the transportation of fuel and waste, with an emphasis upon those States, units of local government, and tribes through whose jurisdiction the Secretary plans to transport substantial amount of fuel or waste.

Subsection (e) requires the Secretary to contract with private industry to the greatest extent possible in each aspect of transportation. The Secretary is allowed to use direct Federal services only to the extent that the Secretary of Transportation determines that private industry is unable or unwilling to provide such transportation services at reasonable cost.

Subsection (f) specifies that any person that transports spent nuclear fuel or high-level waste pursuant to this Act under contract to Secretary shall comply with all requirements governing such transportation issued by Federal, State and local governments, and Indian tribes to the same extent that any person engaging in that transportation that is in or affects interstate commerce would be required to comply with such requirements, as required by 49 U.S.C. sec. 5126. That statutory provision is a section of the Hazardous Materials Transportation Act that requires any person under contract with the Federal government that transport hazardous materials to comply with Federal, state and local, and tribal requirements (except a requirement preempted by Federal law) in the same way as a private party would comply.

Subsection (g) provides that any person engaged in the interstate commerce of spent nuclear fuel or high-level waste under contract to the Secretary pursuant to this Act shall be subject to and comply fully with the employee protections provisions of 49 U.S.C. 20109 and 49 U.S.C. 31105. Those sections protect employees of rail carriers (49 U.S.C. 20109) and motor carriers (49 U.S.C. 31105) from retaliation for the refusal to work, providing certain conditions are satisfied, when confronted by a hazardous condition related to performance of the employee's duties.

Subsection (h)(1) requires the Secretary of Transportation, no later than 12 months following enactment of NWPA of 1997, pursuant to authority under other provisions of law, to promulgate training standards applicable to workers directly involved in the removal and transportation of spent nuclear fuel and high-level waste. The training standards must specify minimum training standards applicable to workers, including managerial personnel. In addition, the regulation shall require that the employee posses

evidence of satisfaction of the applicable training standard before the employee may be employed in the removal and transportation of fuel and waste.

Subsection (h)(2) authorizes the Secretary of Transportation to refrain from promulgating such training regulations if the Secretary determines that regulations promulgated by the Commission establish adequate training standards for such workers. The DOT and NRC are directed to work through their Memorandum of Understanding to ensure coordination of worker training standards and to avoid duplicative regulation.

Subsection (h)(3) specified the minimum provisions required to be included in the training standards including a specified minimum number of hours of offsite instruction and actual field experience; a requirement that on site managerial personnel receive the same training as workers as well as specialized training related to their managerial responsibilities; and provisions applicable to persons responsible for responding to and cleaning up emergency situations occurring during the removal and transportation of fuel and waste.

Subsection (h)(4) provides that the training standards for emergency responders shall ensure their ability to protect nearby persons, property, or the environment from the effects of accidents involving spent nuclear fuel and high-level waste.

Subsection (h)(5) authorizes to be appropriated to the Secretary of Energy such sums as may be necessary to perform his duties under this subsection.

TITLE III—DEVELOPMENT OF NATIONAL NUCLEAR SPENT FUEL STRATEGY

The Nuclear Waste Policy Act of 1982 set up a selection process for permanent geologic repositories for spent nuclear fuel. In 1987, the Act was subsequently amended to allow consideration only of Yucca Mountain. This title sets up the Office of Civilian Radioactive Waste Management with the sole function of qualifying a repository and permanently disposing of the spent fuel.

This provision authorizes an Office of Nuclear Spent Fuel Research, with the charter to study “treatment, recycling, and disposal” of spent fuel with emphasis on minimizing health risks to the general public or site workers, minimizing proliferation concerns, and studying cost-effective technologies. It specifically requires study of reprocessing and transmutation (by both accelerators and reactors) and requires international participation.

COST AND BUDGETARY CONSIDERATIONS

In compliance with paragraph 11(a) of the rule XXVI of the Standing Rules of the Senate, the Congressional Budget Office cost estimate has been requested but was not received at the time the report was filed. When the report is available, the Chairman will request that it be printed in the Congressional Record for the advice of the Senate.

REGULATORY IMPACT EVALUATION

In compliance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee makes the following evaluation of the regulatory impact which would be incurred in implementing this legislation. The bill is not a regulatory measure in the sense of imposing Government-established standards or significant economic responsibilities on private individuals and businesses above those in existing law.

No personal information would be collected in administering the program. Therefore, there would be no impact on personal privacy.

Little, if any, additional paperwork would result from the enactment of the bill.

EXECUTIVE COMMUNICATIONS

The Committee on Energy and Natural Resources has not received a legislative report from the Department of Energy at the time the report the original bill was filed. When the report becomes available, the Chairman will request that it be printed in the Congressional Record for the advice of the Senate. The Committee has received the following communication from the Department of Energy with regard to S. 608 and related legislation.

THE SECRETARY OF ENERGY,
Washington, DC, June 15, 1999.

Hon. FRANK MURKOWSKI,
*Chairman, Committee on Energy and Natural Resources,
U.S. Senate, Washington, DC.*

DEAR MR. CHAIRMAN: I was disappointed to learn that your Committee will hold a markup tomorrow on interim storage legislation, S. 608, the Nuclear Waste Policy Amendments Act of 1999. I understand, however, that the Committee is continuing to look at other proposals, and I look forward to reviewing them when they are available.

I have been encouraged by Senator Bingaman's effort to develop a substitute acceptable to all parties, and I had hoped that some agreement could be reached on an alternative to interim storage prior to your Committee taking action on legislation. I continue to believe that taking title to spent fuel at reactor sites could provide a basis for resolving many of the utilities' concerns, particularly in light of the decision by the U.S. Court of Federal Claims that the standard contract provides an adequate remedy.

Let me reiterate the Administration's opposition to any legislation that would make a decision to place an interim storage facility in Nevada prior to completion of the scientific and technical work necessary to determine where a final repository will be located.

As you are well aware, the Department has completed considerable work at Yucca Mountain and submitted its viability assessment to Congress and the President in December 1998. While the viability assessment found no technical showstoppers at Yucca Mountain, it identified a number of scientific issues that remain to be addressed before the Department will be able to make a judgment on the suitability and licensability of the site. Making a decision now to place interim storage in Nevada, in advance of comple-

tion of the scientific work, undermine public confidence that a repository evaluation will be objective and technically sound, and jeopardize the credibility of any future decisions related to Yucca Mountain. It also does not make sense to transport spent fuel across the country until we know where the final repository will be.

In addition, the Administration strongly objects to any legislative provisions that would weaken existing environmental standards by mandating a specific radiation protection standard and removing the Environmental Protection Agency from its standard-setting role and by preemption of Federal, State, and local laws.

For the reasons stated above, the Administration remains opposed to the proposed interim storage legislation, and I would recommend a veto if legislation containing these provisions were presented to the President.

As you know, the Department has been discussing my alternative proposal to take title to spent fuel at reactor sites with a number of utilities and other interested parties, and we will continue to do so. Similarly, I hope that we can continue to work with you on these issues and that a proposal can be developed that would be acceptable to all parties.

Yours sincerely,

BILL RICHARDSON.

MINORITY VIEWS OF SENATOR BINGAMAN

I commend Senator Murkowski for setting aside his bill to build an interim storage facility for nuclear waste in Nevada in favor of the original bill the Committee reports today. Although Senator Murkowski had the votes to report his interim storage bill out of Committee, it could not be enacted into law. It would have met with the same fate as the interim storage bills in the past two Congresses.

For the past few months, I have worked with Secretary Richardson and members of the nuclear industry to try to craft a solution to the nuclear waste problem. Our efforts focused on having the Department of Energy take title to the utilities' waste and store it where it is until the repository is licensed. We came very close to reaching a consensus on a draft bill.

Senator Murkowski's original bill incorporates the take-title concept and draws heavily on our draft ("draft 10"). Senator Murkowski's decision to abandon the centralized interim storage approach in favor of onsite storage is a step in the right direction. Unfortunately, however, Senator Murkowski's bill does not resolve the remaining differences and it introduces new provisions which make it harder to win the Administration's support. Regrettably, I cannot support it in its current form.

My principal objection to the bill is found in the section on radiation protection standards, section 103. Section 103 divests the Environmental Protection Agency of its statutory role in setting standards to protect the health and safety of the public from radiation emitted from the nuclear waste repository and vests the authority in the Nuclear Regulatory Commission. The Administration has repeatedly stated its opposition to this step. As recently as June 15, 1999, Secretary Richardson informed the Committee that "the Administration strongly objects to any legislative provisions that would weaken existing environmental standards by mandating a specific radiation protection standard and removing the Environmental Protection Agency from its standard-setting role. * * *

The Administration's reasons for this position are sound. The authority to set radiation protection standards has been kept separate from the authority to license and regulate nuclear energy activities since President Eisenhower created the Federal Radiation Council in 1959. The authority has been vested in the Environmental Protection Agency since President Nixon created the Agency in 1970. Congress gave EPA the authority to set standards for the nuclear waste repository in 1982 and reaffirmed the authority in 1992. EPA acted responsibly in setting standards for the Waste Isolation Pilot Plant and for certifying that they were met. EPA's independent and professional assessment of WIPP gave the citizens of my state the assurance they needed that WIPP was safe. The citizens of Nevada deserve no less.

The original bill contains other problems. First, it does not solve the problem facing Northern States Power's Prairie Island plant, which will run out of storage space at the end of 2006 and will have to shut down if DOE is unable to provide off-site storage for its waste. The Nuclear Waste Policy Act of 1982 authorized DOE to provide off-site storage at federal sites to address this problem, but that authority has since expired. I proposed reviving that authority to keep Prairie Island running. The Chairman's bill does not.

Moreover, the backup storage solution in section 102 of the bill, as it has been rewritten by the Chairman, may now be unworkable. Section 102 requires DOE enter into contracts to store spent nuclear fuel for utilities that run out of onsite storage space, but it allows DOE to store the waste only at the repository site or at a privately owned interim storage site and not another federal site. Thus, under the Chairman's bill, if the NRC has licensed neither the repository nor a private storage site by the end of 2006, Northern States Power will not only have to shut down its Prairie Island plant but DOE may be held liable for breach of contract.

Second, section 106 imposes an "acceptance schedule" for receiving waste at the repository that is both too aggressive and not aggressive enough. Section 106 requires DOE to move up its shipping schedule by four years and to ship three times as much waste in the first year and twice as much in the second year as it now plans. At the same time, title II of the bill imposes a host of new transportation requirements that will make it harder for DOE to meet the new schedule. Conversely, in later years, beginning in 2015, section 106 will require DOE to accept *less* waste from commercial spent fuel, *less* naval reactor fuel, and *less* high-level defense waste than DOE currently plans to accept.

Third, while title II adds page after page of new transportation requirements, it omits two of the most needed. Under the WIPP Land Withdrawal Act, DOE can ship no transuranic waste to WIPP except in containers "that have been determined by the Nuclear Regulatory Commission to satisfy its quality assurance requirements." I proposed giving the NRC the same power over spent fuel and high-level waste shipments to the repository. The Chairman's bill omits it.

Similarly, the NRC testified that the new transportation requirements do not give it the power it needs to regulate DOE shipments of DOE-titled waste. The NRC can certify DOE shipping casks under title II, but it cannot inspect shipments for radiological safety, review and approve physical security plans, or oversee DOE shipments. I proposed correcting this deficiency. The Chairman's bill does not.

In addition, title II creates confusion on when DOE will start shipping nuclear waste on the public highways and railroads. The thrust of the bill is to leave the waste where it is until the NRC licenses the repository in 2006. But section 201(d)(7)(B) expressly contemplates rail shipments of spent nuclear fuel and high-level radioactive waste within a year after the bills enactment and section 202(c)(2)(B) provides for highway shipments within four years after the bill's enactment. This inconsistency needs to be resolved or explained.

Fourth, the Chairman's bill adds a new title III on reprocessing transmutation. I am not opposed to more research on these alternatives. But we need to recognize that commercial reprocessing is prohibitively expensive and that other nations that have looked at transmutation, such as the United Kingdom, have decided that it will not solve the spent fuel problem.

The Chairman's bill not only creates a new bureaucracy and authorizes a broad research and development program to study reprocessing and transmutation in this country, it requires the new office to "fund international collaborators" if "their host country is unable to provide for their support." The Chairman's bill does not tell us how much these activities, at home and abroad, will cost. Nor does it tell us whether the cost will be paid for by American ratepayers through the Nuclear Waste Fund or by American taxpayers through tax revenues. Neither solution makes any sense to me at a time when Congress is unable to fund the repository program at the level it needs to stay on schedule.

For these reasons, I had to oppose the Chairman's bill. I regret having to do so, after having invested a great deal of time and effort in trying to resolve the differences between the Administration and the nuclear industry over this issue in the past several months. I am still hopeful that we can work out these remaining differences as the bill moves forward.

JEFF BINGAMAN.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of Rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as ordered reported, are shown as follows (existing law proposed to be omitted in enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

ENERGY POLICE ACT OF 1992

* * * * *

TITLE VIII—HIGH-LEVEL RADIOACTIVE WASTE

[SEC. 801. NUCLEAR WASTE DISPOSAL.

[(a) ENVIRONMENTAL PROTECTION AGENCY STANDARDS.—

[(1) PROMULGATION.—Notwithstanding the provisions of section 121(a) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10141(a)), section 161 b. of the Atomic Energy Act of 1954 (42 U.S.C. 2201(b)), and any other authority of the Administrator of the Environmental Protection Agency to set generally applicable standards for the Yucca Mountain site, the Administrator shall, based upon and consistent with the findings and recommendations of the National Academy of Sciences, promulgate, by rule, public health and safety standards for protection of the public from releases from radioactive materials stored or disposed of in the repository at the Yucca Mountain site. Such standards shall prescribe the maximum annual effective dose equivalent to individual members of the public from releases to the accessible environment from radioactive materials stored or disposed of in the repository. The standards shall be promulgated not later than 1 year after the Administrator receives the findings and recommendations of the National Academy of Sciences under paragraph (2) and shall be the only such standards applicable to the Yucca Mountain site.

[(2) STUDY BY NATIONAL ACADEMY OF SCIENCES.—Within 90 days after the date of the enactment of this Act, the Administrator shall contract with the National Academy of Sciences to conduct a study to provide, by not later than December 31, 1993, findings and recommendations on reasonable standards for protection of the public health and safety, including—

[(A) whether a health-based standard based upon doses to individual members of the public from releases to the accessible environment (as that term is defined in the regulations contained in subpart B of part 191 of title 40, Code of Federal Regulations, as in effect on November 18, 1985) will provide a reasonable standard for protection of the health and safety of the general public;

[(B) whether it is reasonable to assume that a system for post-closure oversight of the repository can be developed, based upon active institutional controls, that will prevent an unreasonable risk of breaching the repository's engineered or geologic barriers or increasing the exposure of individual members of the public to radiation beyond allowable limits; and

[(C) whether it is possible to make scientifically supportable predictions of the probability that the repository's engineered or geologic barriers will be breached as a result of human intrusion over a period of 10,000 years.

[(3) APPLICABILITY.—The provisions of this section shall apply to the Yucca Mountain site, rather than any other authority of the Administrator to set generally applicable standards for radiation protection.

[(b) NUCLEAR REGULATORY COMMISSION REQUIREMENTS AND CRITERIA.—

[(1) MODIFICATIONS.—Not later than 1 year after the Administrator promulgates standards under subsection (a), the Nuclear Regulatory Commission shall, by rule, modify its technical requirements and criteria under section 121(b) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10141(b)), as necessary, to be consistent with the Administrator's standards promulgated under subsection (a).

[(2) REQUIRED ASSUMPTIONS.—The Commission's requirements and criteria shall assume, to the extent consistent with the findings and recommendations of the National Academy of Sciences, that, following repository closure, the inclusion of engineered barriers and the Secretary's post-closure oversight of the Yucca Mountain site, in accordance with subsection (c), shall be sufficient to—

[(A) prevent any activity at the site that poses an unreasonable risk of breaching the repository's engineered or geologic barriers; and

[(B) prevent any increase in the exposure of individual members of the public to radiation beyond allowable limits.]

* * * * *

NUCLEAR WASTE POLICY ACT OF 1982

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TITLE I—DISPOSAL AND STORAGE OF HIGH-LEVEL RADIOACTIVE WASTE, SPENT NUCLEAR FUEL, AND LOW-LEVEL RADIOACTIVE WASTE

RECOMMENDATION OF CANDIDATE SITES FOR SITE CHARACTERIZATION

SEC. 112. (a) GUIDELINES.—Not later than 180 days after January 7, 1983, the Secretary, following consultation with the Council on Environmental Quality, the Administrator of the Environmental Protection Agency, the Director of the United States Geological Survey, and interested Governors, and the concurrence of the Com-

mission shall issue general guidelines for the recommendation of sites for repositories. Such guidelines shall specify detailed geologic considerations that shall be primary criteria for the selection of sites in various geologic media. Such guidelines shall specify factors that qualify or disqualify any site from development as a repository, including factors pertaining to the location of valuable natural resources, hydrology, geophysics, seismic activity, and atomic energy defense activities, proximity to water supplies, proximity to populations, the effect upon the rights of users of water, and proximity to components of the National Park System, the National Wildlife Refuge System, the National Wild and Scenic Rivers Systems, the National Wilderness Preservation System, or National Forest Lands. Such guidelines shall take into consideration the proximity to sites where high-level radioactive waste and spent nuclear fuel is generated or temporarily stored and the transportation and safety factors involved in moving such waste to a repository. Such guidelines shall specify population factors that will disqualify any site from development as a repository if any surface facility of such repository would be located (1) in a highly populated area; or (2) adjacent to an area 1 mile by 1 mile having a population of not less than 1,000 individuals. Such guidelines also shall require the Secretary to consider the cost and impact of transporting to the repository site the solidified high-level radioactive waste and spent fuel to be disposed of in the repository and the advantages of regional distribution in the siting of repositories. Such guidelines shall require the Secretary to consider the various geologic media in which sites for repositories may be located and, to the extent practicable, to recommend sites in different geologic media. The Secretary shall use guidelines established under this subsection in considering candidate sites for recommendation under subsection (b). The Secretary may revise such guidelines from time to time, consistent with the provisions of this subsection. *The Secretary's guidelines shall not be inconsistent with any standards promulgated under section 121, and to the extent practicable, any conclusions of the Secretary regarding site suitability shall be based on an assessment of total system performance of the repository.*

* * * * *

SITE APPROVAL AND CONSTRUCTION AUTHORIZATION

SEC. 114. (a) * * *

(b) SUBMISSION OF APPLICATION.—If the President recommends to the Congress the Yucca Mountain site under subsection (a) and the site designation is permitted to take effect under section 115, the Secretary shall submit to the Commission an application for a construction authorization for a repository at such site not later than 90 days after the date on which the recommendation of the site designation is effective under such section and shall provide to the Governor and legislature of the State of Nevada a copy of such application. *In developing an application for authorization to construct the repository, the Secretary shall seek to maximize the capacity of the repository.*

* * * * *

(d) COMMISSION ACTION.—The Commission shall consider a application for a construction authorization for all or part of a repository in accordance with the laws applicable to such applications, except that the Commission shall issue a final decision approving or disapproving the issuance of a construction authorization not later than the expiration of 3 years after the date of the submission of such application, except that the Commission may extend such deadline by not more than 12 months if, not less than 30 days before such deadline, the Commission complies with the reporting requirements established in subsection (e)(2). [The Commission decision approving the first such application shall prohibit the emplacement in the first repository of a quantity of spent fuel containing in excess of 70,000 metric tons of heavy metal or a quantity of solidified high-level radioactive waste resulting from the reprocessing of such a quantity of spent fuel until such time as a second repository is in operation.] In the event that a monitored retrievable storage facility, approved pursuant to subtitle C of this Act, shall be located, or is planned to be located, within 50 miles of the first repository, then the Commission decision approving the first such application shall prohibit the emplacement of a quantity of spent fuel containing in excess of 70,000 metric tons of heavy metal or a quantity of solidified high-level radioactive waste resulting from the reprocessing of spent fuel in both the repository and monitored retrievable storage facility until such time as a second repository is in operation.

* * * * *

CERTAIN STANDARDS AND CRITERIA

[SEC. 121. (a) ENVIRONMENTAL PROTECTION AGENCY STANDARDS.—Not later than 1 year after January 7, 1983, the Administrator, pursuant to authority under other provisions of law, shall, by rule, promulgate generally applicable standards for protection of the general environment from offsite releases from radioactive material in repositories.

[(b) COMMISSION REQUIREMENTS AND CRITERIA.—(1)(A) Not later than January 1, 1984, the Commission, pursuant to authority under other provisions of law, shall, by rule, promulgate technical requirements and criteria that it will apply, under the Atomic Energy Act of 1954 (42 U.S.C 2011 et seq.) and the Energy Reorganization Act of 1974 (42 U.S.C. 5801 et seq.) in approving or disapproving—

- [(i) applications for authorization to construct repositories;
- [(ii) applications for licenses to receive and possess spent nuclear fuel and high-level radioactive waste in such repositories; and
- [(iii) applications for authorization for closure and decommissioning of such repositories.

[(B) Such criteria shall provide for the use of a system of multiple barriers in the design of the repository and shall include such restrictions on the retrievability of the solidified high-level radioactive waste and spent fuel emplaced in the repository as the Commission deems appropriate.

[(C) Such requirements and criteria shall not be inconsistent with any comparable standards promulgated by the Administrator under subsection (a).

[(2) For purposes of this Act, nothing in this section shall be construed to prohibit the Commission from promulgating requirements and criteria under paragraph (1) before the Administrator promulgates standards under subsection (a). If the Administrator promulgates standards under subsection (a) after requirements and criteria are promulgated by the Commission under paragraph (1), such requirements and criteria shall be revised by the Commission if necessary to comply with paragraph (1)(C).

[(c) ENVIRONMENTAL IMPACT STATEMENT.—The promulgation of standards or criteria in accordance with the provisions of this section shall not require the preparation of an environmental impact statement under section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C)), or to require any environmental review under subparagraph (E) or (F) of section 102(2) of such Act.]

SEC. 121. (a) REPOSITORY LICENSING STANDARDS.—The Commission shall establish standards for protection of the public and the environment for releases of radioactive materials or radioactivity from the repository, consistent with the following:

(1) RISK STANDARD.—The standard for protection of the public and environment from releases of radioactive material or radioactivity from the repository after permanent closure shall limit the lifetime risk to the average member of the critical group of premature death from cancer due to such releases to approximately, but not greater than, 1 in 1000.

(2) ESTABLISHMENT OF OVERALL SYSTEM PERFORMANCE OBJECTIVE.—The Commission shall implement the standard in paragraph (1) by establishing, by rule, an overall system performance objective for expected annual dose to the average member of the critical group. The Commission shall not promulgate performance objectives for the repository in the form of release limits or contaminant levels for individual radionuclides discharged from the repository.

(3) ASSUMPTION AND FACTORS.—The Commission shall specify, by rule, values for all of the assumptions deemed necessary to apply the overall system performance objective in a licensing proceeding for the repository, including reference biosphere and size characteristics of the critical group. For purposes of establishing the overall system performance objective in paragraph (2) and making the findings in subsection (b), the Commission shall not—

(A) consider climate regimes that are substantially different from those that have occurred during the previous 100,000 years at the Yucca Mountain Site;

(B) consider catastrophic events where the health consequences of individual events themselves to the critical group can be reasonably assumed to exceed the health consequences due to the impact of the events on repository performance; and

(C) base the overall system performance objective in paragraph (2) or the finding in subsection (b) on scenarios in-

volving human intrusion into the repository following repository closure, although the Commission may consider the consequences of an assumed human intrusion scenario to determine if repository performance would be substantially degraded by a single instance of human intrusion during the first 1,000 years after repository closure.

(4) *DEFINITIONS.—As used in this section, the term “critical group” means a small group of people that is—*

(A) representative of individuals expected to be at highest risk of premature death from cancer as a result of discharges of radionuclides from the repository;

(B) relatively homogeneous with respect to expected radiation dose, which shall mean that there shall be no more than on the order of a factor of 10 in variation in individual doses among members of the group; and

(C) selected using reasonable assumptions concerning lifestyle, occupation, diet and eating habits, technological sophistication, and other relevant social and behavioral factors that are based on reasonable available information on inhabitants and conditions in the area within a 50-mile radius surrounding Yucca Mountain when the group is defined.

(b) *APPLICATION OF OVERALL SYSTEM PERFORMANCE OBJECTIVE.—The Commission shall issue a construction authorization, license to dispose of spent nuclear fuel and high-level radioactive waste in the repository, and license amendment to permit permanent closure of the repository, upon a finding of reasonable assurance, making allowance for the time period, hazards, and uncertainties involved, that for the first 10,000 years following closure of the repository, the overall system performance established pursuant to subsection (a) will be met. The finding of reasonable assurance shall be based on regulatory insight gained by the Commission through use of predictive models, supported, to the extent deemed practicable by the Commission, by data from field and laboratory tests, site-specific monitoring, and natural analog studies and supplemented, as necessary, by expert judgment.*

(c) *ENVIRONMENTAL IMPACT STATEMENT.—The promulgation of standards or criteria in accordance with the provisions of this section shall not require the preparation of an environmental impact statement under section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C)) or any environmental review under subparagraph (E) or (F) of section 102(2) of such Act.*

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TITLE III—OTHER PROVISIONS RELATING TO RADIOACTIVE WASTE

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NUCLEAR WASTE FUND

SEC. 302. (a) *CONTRACTS.—*(1) In the performance of his functions under this chapter, the Secretary is authorized to enter into contracts with any person who generates or holds title to high-level radioactive waste, or spent nuclear fuel, of domestic origin for the

acceptance of title, subsequent transportation, and disposal of such waste or spent fuel. Such contracts shall provide for payment to the Secretary of fees pursuant to paragraphs (2) and (3) sufficient to offset expenditures described in subsection (d).

(2) For electricity generated by a civilian nuclear power reactor and sold on or after the date 90 days after January 7, 1983, the fee under paragraph (1) shall be equal 1.0 mil per kilowatt-hour.

(3) For spent nuclear fuel, or solidified high-level radioactive waste derived from spent nuclear fuel, which fuel was used to generate electricity in a civilian nuclear power reactor prior to the application of the fee under paragraph (2) to such reactor, the Secretary shall, not later than 90 days after January 7, 1983, establish a 1 time fee per kilogram of heavy metal in spent nuclear fuel, or in solidified high-level radioactive waste. Such fee shall be in an amount equivalent to an average charge of 1.0 mil per kilowatt-hour for electricity generated by such spent nuclear fuel, or such solidified high-level waste derived therefrom, to be collected from any person delivering such spent nuclear fuel or high-level waste, pursuant to section 123, to the Federal Government. Such fee shall be paid to the Treasury of the United States and shall be deposited in the separate fund established by subsection (c) 126(b). In paying such a fee, the person delivering spent fuel, or solidified high-level radioactive wastes derived therefrom, to the Federal Government shall have no further financial obligation to the Federal Government for the long-term storage and permanent disposal of such spent fuel, or the solidified high-level radioactive waste derived therefrom.

(4) Not later than 180 days after January 7, 1983, the Secretary shall establish procedures for the collection and payment of the fees established by paragraph (2) and paragraph (3). The Secretary shall annually review the amount of the fees established by paragraphs (2) and (3) above to evaluate whether collection of the fee will provide sufficient revenues to offset the costs as defined in subsection (d) herein. In the event the Secretary determines that either insufficient or excess revenues are being collected, in order to recover the costs incurred by the Federal Government that are specified in subsection (d), the Secretary shall propose an adjustment to the fee to insure full cost recovery. The Secretary shall immediately transmit this proposal for such an adjustment to Congress. [The adjusted fee proposed by the Secretary shall be effective after a period of 90 days of continuous session have elapsed following the receipt of such transmittal unless during such 90-day period either House of Congress adopts a resolution disapproving the Secretary's proposed adjustment in accordance with the procedures set forth for congressional review of an energy action under section 551 of the Energy Policy and Conservation Act.] *The adjusted fee proposed by the Secretary shall be effective upon enactment of a joint resolution or other provision of law specifically approving the adjusted fee.*

(5) Contracts entered into under this section shall provide that—

(A) following commencement operation of a repository, the Secretary shall take title to the high-level radioactive waste or spent nuclear fuel involved as expeditiously as practicable

upon the request of the generator or owner of such waste or spent fuel; and

(B) in return for the payment of fees established by this section, the Secretary, beginning not later than January 31, 1998, will dispose of the high-level radioactive waste or spent nuclear fuel involved as provided in this subtitle.

(6) The Secretary shall establish in writing criteria setting forth the terms and conditions under which such disposal services shall be made available.

